Specifics of International Business Competitiveness in Visegrad Countries – Qualitative Analysis of Selected Case Studies

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CHAPTER 7

Specifics of International Business Competitiveness in Visegrad Countries – Qualitative Analysis of Selected Case Studies

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7.1. INTRODUCTORY REMARKS

The chapter offers an institutional approach to the issue of international business competitiveness. It is assumed that the micro-level, business-oriented factors of competitiveness are influenced by macro-level and institutional factors. These institutional factors can be analysed with the FOI model developed at the University of Miskolc by the Institute of Economic Theory.

The FOI model offers a new typology of development factors, but it is also capable of structuring these factors along three clear development directions.

- **F**, i.e. the future potential of a country;
- **O**, i.e. the outside potential of a country;
- **I**, i.e. the inside potential of a country.

The three potentials fundamentally influence the business environment of an economy, and therefore have an effect on the international business competitiveness. The model enables us to measure the three potentials of the Visegrad countries with the FOI-indices. In order to better understand, what background factors drive the value of the different F-, O- and I-indices, a factor analysis was conducted. Almost 150 variables were tested during the analysis. The factor structure deducted from the analysis is not only suitable to investigate micro-level competitiveness (e.g. ease of doing business), but it can also be used to quantify such background factors as national goodwill or investment conditions.

The discussion section of the chapter presents the FOI-index and the selected factor values of the Visegrad countries, and discusses the best practices of well-performing countries.

7.2. THEORETICAL BACKGROUND

The Concept of Competitiveness

The word 'competition' is the derivative of the Latin expression *conpetere*, meaning seeking a common goal or opportunity together. Despite the original meaning, competition in economics is often interpreted as a win or lose case in a zero sum game: those who are able to increase their competitiveness, will dominate over those who slip behind. Some of the most relevant sources on competitiveness (most notably: Porter, 1990) however suggest that competition and the seeking of competitiveness can be a win-win game, favouring all parties taking part in the race.
The level at which competitiveness is explained is another debated area. Traditionally competitiveness was interpreted on a microeconomic level. In the microeconomic approach the competitiveness of goods and the competitiveness of firms is analysed.

- The competitiveness of goods and services is mainly dependent on their quality and price. These two elements have the greatest influence on the sales volume, however other activities like market research, advertising, customer relations, distribution channels, customer support also contribute to the competitiveness, not to mention the effect of such factors as the change in consumption trends, market saturation and barriers to enter a market (Szentes, 2012).
- The competitiveness of firms is based on their ability to make profits, which on the other hand is largely determined by the competitiveness of their goods and services. Other factors contributing to the competitiveness are: the ability to increase the market share, corporate image and brands, the ability to access financial resources (Szentes, 2012; Wach, 2014).

The concept of macro-level competitiveness, or national competitiveness is a relatively new idea. It was first mentioned in the competitiveness literature at the beginning of the 1980es (Czakó, 2003). The OECD defines competitiveness as the degree to which a state may produce goods and services that should pass the test of international competition, and in the same time to maintain and develop its incomes at national level (OECD, 1992). The idea of national competitiveness is twofold:

- On the one hand macro competitiveness shows the ability of a country to sustain a high level of national income and a favourable position in the world economy (measured by the rate at which a nation can enforce its socioeconomic, political and military interest on the international scene).
- On the other hand it shows the ability of a country to create a business environment in which the local firms and businesses are able to compete internationally. Porter (1990) went even further by saying that the competitiveness of a nation is equal to the competitiveness of its firms.

It is therefore impossible to analyse the international competitiveness of Visegrad country businesses without the macroeconomic elements of national competitiveness, and vice versa: national competitiveness is greatly based on micro-level competitiveness (of firms and products). The two best known measurement methods developed by the World Economic Forum (WEF) and the International Institute for Management Development (IMD) both reflect this interdependency between micro- and macro-level competitiveness.

- The Global Competitiveness Index (GCI, developed by WEF) is based on 12 pillars all consisting of several factors, but the pillars either characterise the macro competitiveness (e.g. institutions, infrastructure, macroeconomic environment, market size, education, health care), or mezzo and micro competitiveness (e.g. labour market, financial market, market of goods, technology and innovation).
- The World Competitiveness Index (WCI, developed by IMD) has 4 main factors, but again, these factors are either macroeconomic in nature (e.g. economic performance, government intervention and infrastructure), or can directly be related to the businesses (Business efficiency).

Both indices have their pros and cons. The main forte of the GCI is that it reflects the differences between developed and developing countries; the WCI on the other hand involves a lot more indicators in its analyses of competitiveness. The way their pillars and factors were set up however, makes it difficult to identify the strength and weaknesses of the Visegrad countries, and the high number of indicators used leads to the problem of multicollinearity (for a detailed discussion of GCI and WCI see Bartha-Gubik-Tóthné, 2013).

The FOI Model

Because of the weaknesses of GCI and WCI, the micro and macro competitiveness of the Visegrad group will be evaluated with the FOI model developed at the University of Miskolc. The FOI model was primarily developed to measure the development potential of Hungary, and to characterise the development paths taken by the OECD countries. But as the OECD definition of national competitiveness quoted above shows, the factors of development and competitiveness are basically the same. A good model that identifies the key factors of development of a country can also be used to characterise the key factors of competitiveness. The FOI model therefore enables a very delicate analyses of the factors contributing to the competitiveness of the Visegrad countries, and so it allows us to carefully identify the strengths of the region. This section is therefore made up of four parts:

- The first part introduces the theoretical background of the FOI model.
- The second part presents the methodology used to set up the model.

– The third part shows how the indices of the model may be calculated for the OECD countries.
– While the final part of this section offers a factor analyses, with the help of which the strength and weaknesses of the Visegrad countries may be identified.

Growth and Development in Economics

Growth and development are mentioned almost as synonyms in the following sections, although the literature usually addresses them separately. The simplest approach is to say that growth is the narrower, and development is the more complex class, as growth is usually defined as an increase in certain quantitative variables, while development describes a process of moving from a lower level of quality to a higher one (Szentes, 2011). As the measurement of the phenomena economics usually deals with is problematic anyway, the most popular, formalised growth models (e.g. Domar, 1947; Harrod, 1948; Solow, 1956; Romer, 1986; Lucas, 1988) concentrate on the national income or on its per capita version. These models therefore map the problem of growth/development through the quantitative change of a single indicator, so they offer tools to analyse the problem of growth, the narrower category.

The GDP however – being an aggregate indicator – veils more profound processes that are crucial for micro- and macro-level competitiveness, such as the structure of the economic system, changes in employment, income distribution or the institutional framework, etc. For this reason, from now on, we will use the more complex approach to development whenever we touch upon issues of growth and/or development paths, factors of growth and/or development, meaning that we interpret development and competitiveness as a combination of two things: growth in the indicators of national income, and the modernising of the socioeconomic structures.

Theories of Development

The different schools of economics have had different views on the rules of the economy, and they do not agree on the basic assumptions either; hence, a wide variety of theories have been developed over the centuries. While most schools implicitly assume that the models used are universal, List (1841) was convinced that the classical theories may only apply to the most developed economies; the followers of new institutionalism (see Williamson 2000, for example) point out that the institutional structure of different countries can be very different. A similar confrontation can be observed regarding the development paths. It is widely accepted that development is unilinear, meaning that all countries have to go through the same development stages (with timing being the only difference among them).

Veblen (1919) on the other hand argued against the teleological approach of economics, and suggested an evolutionary one instead.

It worth mentioning that mainstream theories do not consider the effects of national interests and bargaining power in their models; heterodox schools on the other hand cannot accept the independent development of countries (although there is no agreement among them considering the exact nature of the interdependencies). It may seem natural to choose the countries and national economies as the unit of analysis; Wallerstein (1974), however, when describing the economic history of medieval Europe, concludes that modernisation cannot be understood within the national economy framework. He chooses the world system as the unit of analysis instead.

Some scholars have developed models with few explanatory factors; others have gone for more variables. The well-known growth theories pick one or two variables; Porter's diamond model (1990) combines four quite complex factors; the empirical study of Barro (1998) of 100 countries spanning over 30 years finds seven factors that are strongly connected to the growth rate of the real GDP.

The factors of development identified in the economics literature can be categorised along many principles, but the location of factors is probably the most important division line.

One camp of economists traces back differences in economic development to reasons that can be found inside the country. They point to factors whose presence (e.g. physical or human capital) or lack (e.g. government failures) enables high growth rates. Another group of economists finds the causes of underdevelopment in outside factors. Usually these theories take the differences in the development level as given in the world economy, and they assume that these differences lead to asymmetric dependencies. The asymmetric dependencies on the other hand make it very difficult for underdeveloped countries to catch up with the rich world. The inside-outside distinction among the factors of development plays a crucial role in the FOI model.

The FOI Model

Adam Smith (1776) saw the division of labour as the main source of wealth. The countries that are able to extend the division of labour among their firms and citizens can become wealthier, as they are able to produce a higher quantity with the same labour input. The main finding of the Harrod–Domar model (1947; 1948) is that investments are the key to economic growth. Investments on the other hand are mainly dependent on the savings rate. Around a decade later Solow (1956) pointed out that investments and savings cannot contribute to growth in the long run. In his view, long-term economic growth is driven by technical change.

Keynes (1936) suggested that crises are generated by limits in demand, and the latter may be strengthened by large income differences. The speculative demand for money of those who are well off can be especially high, which prevents a substantial part of the income from turning into effective market demand. Inequalities in income distribution thus can be a setback for balanced growth.

Schumpeter (1934) stressed that cyclical fluctuations should be regarded as a natural part of the economy, as entrepreneurs may only draw profits if they break the status quo of equilibrium. The way to break the status quo is through innovation, which therefore becomes the primary driver of the cyclical development. McClelland (1957) also emphasised the importance of the entrepreneurial class. In his view entrepreneurs are the pioneers of development, and their biggest motivator is not profit, but the achievement of some special goals (N-achievement).

When the big colonial empires collapsed, several academics explained the situation of the underdeveloped former colonies with a value system and social structure that was different from the Western one. In underdeveloped countries the rural characteristics of the society are dominant, meaning that labour is inefficient, immobile, the social structure is rigid, and the general attitude rejects individualism and risk taking (Meier 1964). When local values confront the Western values, the society is split into two groups, and a dual social structure is formed (Boeke 1953), which is completed with a dual economic structure as well (where the traditional and modern sectors are insulated from each other).

The role of human capital in growth and development is highlighted in various forms in the literature. Szentes (2011) quotes from A. Marshall: from a national perspective the capital invested in workers' children is just as productive as capital invested in horses or machinery. Newer theories unquestionably suggest that capital invested in children is far more productive than that invested in horses and machinery. Endogenous growth theories see increasing returns as a prime source of long- term growth, and they directly or indirectly explain increasing returns with human capital. Lucas (1988) treats human capital as a reproducible one, an element of capital that the society is able to broaden at a constant rate. The expansion of human capital, on the other hand, leads to a constant increase in the productivity of the physical capital. Romer (1986) also can be connected to human capital. In his model, investments made in research and development produce positive externalities that enable a constant increase in the productivity of physical capital.

Veblen (1919) points out that human behaviour is deeply affected by institutionalised rules of society. His views were taken over by new institutional economists (e.g. North, 1993; Williamson, 1998). According to them institutions affect the incentive system of an economy, while the incentive system on the other hand influences the behaviour, size and competition of firms, the level of investments and technological development, and so, ultimately the level of development of an

economy. The lack of competitiveness thus is explained by institutional frameworks consisting of bad incentives, according to the new institutional school.

Partially connected to the institutional approach is the theory of government failures, which was mainly brought into the attention of development experts by Tullock (1993). It was back in the 1960es when Tullock suggested (1967) that the super profit that monopolistic structures offer can be an incentive for firms to lobby for government regulations granting monopolistic positions and monopoly profits. According to calculations made by Krueger (1974), the rent seeking behaviour of firms in the field of import licences caused a 7.3% GDP loss in India, and a 15% GDP loss in Turkey in 1964. The more corrupt a country is, the weaker the state is, the heavier the costs of rent seeking are, and so rent seeking can be one of the major obstacles of economic development.

Porter's (1990) national competitiveness theory adds some highly complex factors to the literature of economic development. A somewhat similar idea is suggested by Freeman (1987), who developed the theory of national innovation systems. These systems are centred around cooperation among businesses, the education system and the research infrastructure.

The Outside Factors of Competitiveness and Development

The theory of comparative advantage developed by Ricardo (1817) had become one of the cornerstones of the laissez-faire approach of international relations. According to Ricardo the highest welfare level can only be ensured if trade is conducted along the lines of comparative advantages, and there is a free flow of goods. This free trade principle was questioned by many. List (1841) argued against laissez-faire. He defended protectionism, and suggested protective tariffs for newly established industries (the infant industry argument). His suggestions echoed those of Alexander Hamilton (1791) made in the newly formed USA.

After the Second World War the focus of development economics shifted towards the power relations of different countries. Prebisch (1964) and Myrdal (1957) point out that underdeveloped states are dependent on richer countries, and so the current system of international division of labour is not based on comparative advantages. The internal economic structures of most of the developing countries are directly influenced by the developed ones through the colonial system (Myrdal: forced bilateralism). Balogh (1963) argues that as a result of power inequalities among parties, the economic structure of the developing countries has to be adjusted time after time to the changes generated by technical progress made in the developed economies, and the adjustment process prevents them from achieving long-term growth. The dependency relations lead to one-track specialisation (Singer 1964). The majority of exports of the developing countries are primary products and

commodities, which leads to a decrease in the terms of trade over the long run. Bhagwati in his 1958 paper titled "Immiserizing growth" showed that the decrease in terms of trade can result in a decrease in the national income even if there is dynamic growth in the production of the export sector. One lesson learned from the literature of interdependencies is that a diversified export structure can be an important competitiveness factor.

Table 7.1. Inside and outside competitiveness/development factors

Inside factors	Outside factors
Division of labour (Smith)	Free trade – international division of labour (Ricardo)
Savings rate (Harrod-Domar) Abundance-scarcity of capital	Protectionism Defence of infant industries (List)
Equal-unequal income distribution (Keynes)	Equal or unequal trade partners (Balogh) Pressure to fit to modern patterns (Balogh)
Drive to innovate (Schumpeter)	Unilateral dependency - diversification (Myrdal)
Entrepreneurial behaviour (McClelland)	One-sided specialisation (Singer)
Rigid-flexible social structure (Meier) Imported or organically developed social structures (Boeke)	Immiserizing growth – terms of trade (Bhagwati) Forced bilateralism (Myrdal)
Dual-homogeneous economic structures (Meier)	International wage division- mobility of labour (Emmanuel)
Investments into human capital (Marshall) Human capital, as a renewable resource (Lucas) Positive externalities of R&D (Romer)	Geographical position – core and periphery (Wallerstein)
Institutional incentives (North) Path-dependent development	Investment strategies of multinational companies (Furtado)
Government failure (Tullock) Rent-seeking (Krueger)	Demonstration effect
National diamond (Porter) Innovation systems (Freeman)	
Rule of law, democracy (Barro)	

Source: own study.

Emmanuel (1972) has gone as far as claiming that trade between developing and developed countries is an unequal exchange, which is a manifestation of the imperialism of trade. Unequal exchange was triggered by wage differences, and is sustained by the immobility of labour. Wallerstein (1974) also accepted the concept of unequal exchange, though he argued that it is a result of the different bargaining

power of nations. The core-periphery relations and the geographical position basically predestine the fate of nations, according to Wallerstein.

As the role played by transnational companies in the international flow of goods and capital became more and more dominant, a great deal of attention was directed towards them. Furtado (1970) suggested that the most important development factor is not the interdependencies among countries any more, but the investment strategies of transnational companies. Transnational companies can bring capital to a country, creating jobs, but the newly formed subsidiaries may be isolated from the local economy (Singer, 1964). The ability of a country to attract foreign capital, especially if the capital is invested in fields that can fit in well to the current economic structure of the economy, is another important competitiveness factor.

The demonstration effects of modern consumer societies are worth mentioning, too. Generally the consumers of the developing countries try to follow the consumption patterns of the developed nations. This usually has a cut-down effect on local growth, as the goods fitting to the most current consumption trends are generally produced overseas, so following the trends increases imports, and can contribute to the trade balance deficit.

The Role of Institutions in Development

According to the followers of the institutional school, institutions affect human behaviour, in other words they influence the decisions of economic agents. Veblen was the first to point that out (1919), and also added that it is an oversimplification to assume that market decisions can be analysed independently from any other outside factors, like family, culture, community, politics, etc. His views were neglected by mainstream economics, but the topic was brought into the forefront again by two new research agendas.

On the one hand it was proved by a series of psychological experiments that we are not capable of making such rational decisions as is assumed by economics. The notion of *homo economicus* was debunked by the theory of bounded rationality (Simon, 1957). Agents with bounded rationality behave opportunistically. On the other hand Coase's pioneering article (Coase, 1937) shed light on the fact that the transactions conducted among agents are not frictionless, and depending on the rate of frictions, very different market solutions may prove to be the most efficient ones. If we take a closer look at market transactions, it becomes clear that there are numerous social phenomena that are disregarded by mainstream economics, yet they influence the opportunistic behaviour of market agents and the rate of frictions during transactions. These social phenomena are collectively called institutions.

Hodgson defines institutions (2006) as systems of established and prevalent social rules that structure social interactions. According to the definition above,

language, money, etiquette, the measurement system, and firms can all be regarded as institutions. Institutions make it easier to calculate and forecast the behaviour of agents, thus they contribute to the decrease of uncertainty and frictions during transactions. North (1993) offers a similar definition of institutions: institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction.

Williamson (1998) suggested a hierarchy that proved very useful during our analysis. He separated social analysis into four levels (Figure 1). The different levels are ranked according to the time needed to change them, but they also show what influences what in the society. Higher levels directly influence the level just below them, meaning that no practices may be adopted on the lower levels that are not compatible with the superior levels.

Social embeddedness is on top of the hierarchy (L1). Williamson puts norms, customs, ethical principles, traditions, conventions and religion into this category. Some development factors found in the literature at least partly belong to this level (e.g. the dual structure of the society, entrepreneurial behaviour).

The institutional environment forms the second level (L2). While the informal rules were placed in Level 1, the rules of L2 are formal, codified ones (e.g. constitution, laws, property rights). Although the change of Level 2 rules is also partly evolutionary in nature, calculated interference is also possible on this level (unlike on L1). Such interferences are called first-order economising, which is about finding the ideal combination of formal rules. Many of the development factors belong to the institutional environment: the rule of law, democratic rights, market regulation and protectionism.

First-order economising, however, does not ensure the optimal economic structure. As agents behave opportunistically, they do not keep the formal rules of the economy all the time. Jurisdiction has also got its frictions, meaning that those who follow the rules are not able to enforce their rights against the opportunists instantly and without any costs. This is where the third level (L3) kicks in, called governance by Williamson. The unit of analysis in governance is the transactions made among economic agents, and the contracts mediating those transactions. Such development factors as the coordination of education and research, Porter's national diamond, government failures or rent seeking, can all be reckoned among L3 items.

The final level (L4) is concerned with the allocation of resources, an area which is traditionally addressed by neoclassical economics. The factors of the better-known growth theories (quantities of labour and capital, savings, investments, etc.) all belong to this level.

Williams thinks that new institutional economics addresses problems belonging mainly to Levels 2 and 3. North's and Hodgson's definitions cited above, however, suggest that all phenomena belonging to L1, L2 and L3 can be regarded as

institutions. We therefore treat all factors as institutional factors that can be categorised in one of the top three levels of Williamson's hierarchy.

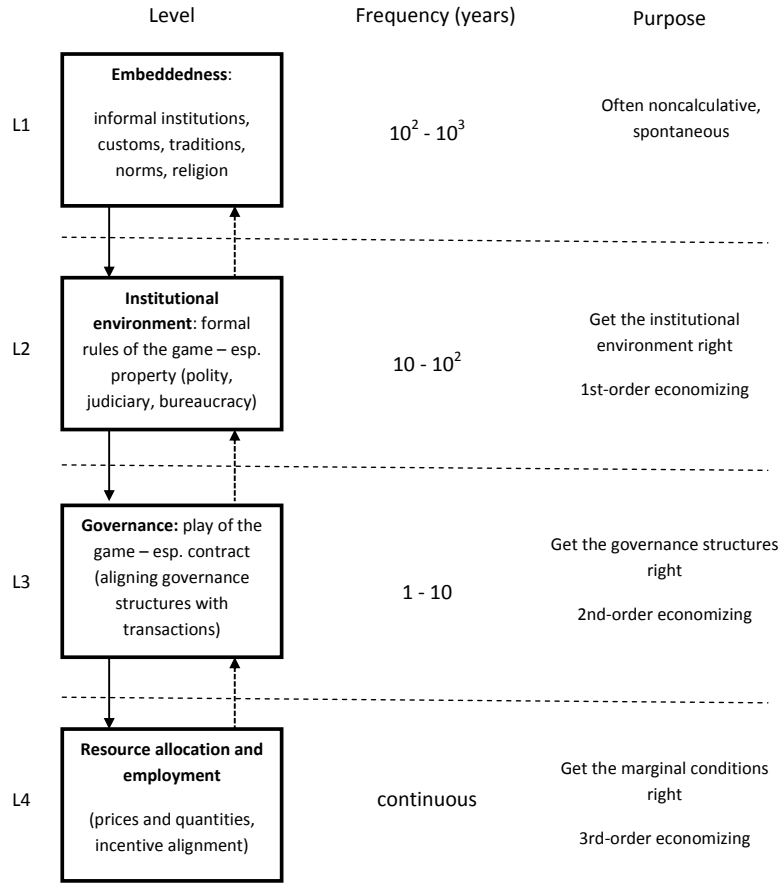


Figure 7.1. Economics of institutions
Source: (Williamson, 1998, p. 26).

7.3. MATERIAL AND METHODS

Structure of the FOI Model

The FOI model is primarily based on the factors collected from the literature, but these factors are structured in a unique way which allows us to draw up characteristic development paths that can be clearly separated from each other. The distinction between development paths also makes possible to identify the strengths and weaknesses of business competitiveness in the Visegrad countries. We used the following assumptions when the FOI model was set up:

– National economies are the unit of our analysis; international interdependencies are mostly disregarded.
– The key to development is not a single factor, but rather a combination of many factors. According to our assumption there are several important motors of development; sometimes these factors do influence each other, and it is very difficult to determine what causes what, still they can be equally important.
– Among the many factors considered in the model, the so-called institutional factors play a primary role. Institutional factors are detected using the hierarchy put forward by Williamson (1998). In fact the model was developed with the aim of stressing the importance of institutional factors in competitiveness and development.

The FOI model offers a new typology of development factors, but it is also capable of structuring these factors along three clear directions of development. As shown previously, the inside-outside typology of development factors is a standard part of the literature. The FOI model, however, is based on a three-dimensional structure. These three dimensions are:
– F, i.e. the future potential of a country.
– O, i.e. the outside potential of a country.
– I, i.e. the inside potential of a country.

All three dimensions are complex, composed of a large scale of factors. Yet they can still be clearly distinguished from each other, which is useful because the clear distinction can help in the clarification of strength and weaknesses in micro- and macro-level competitiveness.

The future potential includes factors that are regarded to be crucial for the sustainability and future competitiveness of an economy. As sustainability has become one of the main paradigms of all social sciences, we felt that the inclusion of it as a separate development dimension was essential. In our case sustainability translates to ensuring that the typical signs and indicators of a developed country characterise not only the current state of the economy but also the relatively distant future.

The outside potential includes factors that are crucial to the current world market position of a country. This second dimension can be treated as an equivalent of the outside factors listed based on the literature. Some of the elements of the outside potential may not be influenced from the inside; others, like the conditions affecting the international flow of goods, services and factors of production, are a standard part of economic policy.

The inside potential is made up of factors that are regarded to be crucial to the current well-being and development of a country. Most of the inside factors listed in

Table 7.1 fall into this potential. Countries that offer favourable conditions to local entrepreneurs, and provide a high level of quality of life to their inhabitants, can have remarkable inside potential.

It is not difficult to spot that certain trade-offs exist among the three potentials. Higher wage levels, for example, are absolutely favourable from the perspective of the inside potential, but they can be dangerous for the outside potential of the country. They can also be threatening to the future potential, if the result of a high wage level is overconsumption. If a country is well endowed with natural resources, this can boost its inside and outside potentials, but the abundance of resources usually leads to high proportions of waste, which again harms the future potential. The three potentials were drafted with these trade-offs in mind.

Formulating a Measurement Method

During a brainstorming session a list of 50 indicators was compiled with the help of experts. These 50 indicators were chosen to measure the relevant development factors, and they were all included in a questionnaire. Experts were asked to rank all 50 indicators on a 1-7 scale (1=not relevant at all; 7= of highest significance). Each indicator received three separate scores: one for future potential, one for outside potential and one for inside potential. The respondents had to give a high score to an indicator if they believed it greatly contributed to the sustainability and future competitiveness (F potential), current world market position (O potential) or current well-being (I potential) of Hungary. The questionnaire was completed by 28 experts. Most of them were active members of the Committee on Future Research of the Hungarian Academy of Sciences. Representing several academic fields (arts, engineering, medicine, natural and social sciences), they offered a wide perspective and a strong future-oriented attitude, values that are highly useful in this kind of research.

During the processing of the questionnaires every indicator was placed in the group (F, O or I potential) where it scored highest, meaning that an indicator could only be part of one of the potentials. In order to eliminate some of the less important factors (which received low scores in all three dimensions), we disregarded everything that had a score below average. The final transformation left us with 27 factors: 12 of them influence the future potential, 10 the inside and 5 the outside potential (Table 7.2).

The final version of the model was fine-tuned using the statistical data of the OECD countries.

Table 7.2. The components of the future, outside and inside potentials

Future potential	Outside potential	Inside potential
Social responsibility (L1-3)	Trade to GDP ratio (L3-4)	Burden of government regulation (L2-3)
Industrial disputes (L1)	Country credit rating (L4)	Quality of life (L4)
Energy infrastructure (L3)	Exchange rate stability (L3)	Collected total tax revenues (L3)
Total public expenditure on education per capita (L3)	Financial institutions' transparency (L3)	Pension funding (L2-3)
Ageing of society (L1-2)	English proficiency (L4)	GDP (PPP) per capita (L4)
Renewable energies (L3)		Real GDP Growth (L4)
Healthy life expectancy (L3)		Ease of access to loans (L3)
Ecological footprint (L1-2)		Rigidity of employment (L3)
Total expenditure on R&D per capita (L3)		Labour force (L4)
Total R&D personnel nationwide per capita (L3)		Skilled labour (L3)
Educational assessment / Mathematics (L3)		

Source: own study.

7.4. RESULTS AND DISCUSSION

The FOI Analysis of the OECD Countries

To quantify the future, outside and inside potentials, the FOI-indices were calculated. The value of the 27 components (listed in Table 2) were gathered for all 34 OECD members for the year 2010, and then all values were transformed to a 1-7 scale using the min-max method. By averaging the standardised values, we were able to calculate the F-, O- and I-indices of all 34 countries (Table 3).

Table 7.3. The F-, O- and I-indices of the OECD countries

Country	F	O	I	Country	F	O	I
Australia	4.20	5.32	4.35	Japan	4.80	3.68	4.01
Austria	4.70	5.41	4.05	South Korea	4.00	4.26	3.33
Belgium	3.90	5.56	3.47	Luxembourg	5.30	6.56	4.45
Canada	3.90	5.41	4.50	Mexico	2.70	3.98	2.85
Chile	3.80	5.03	4.13	Netherlands	4.40	5.54	3.83
Czech Republic	3.10	4.97	3.57	New Zealand	4.20	4.52	4.00
Denmark	4.80	5.77	4.30	Norway	5.20	5.70	4.13
Estonia	3.00	4.94	3.08	Poland	2.90	4.42	3.07
Finland	5.00	5.72	4.02	Portugal	3.50	4.33	2.91
France	4.40	4.46	3.04	Slovakia	3.00	4.82	3.25
Germany	4.30	5.26	3.73	Slovenia	3.40	5.08	2.70
Greece	2.90	3.66	2.50	Spain	3.40	4.23	2.99
Hungary	2.90	4.56	2.55	Sweden	5.10	5.22	4.13
Iceland	5.90	2.33	4.42	Switzerland	5.40	5.37	4.89
Ireland	3.90	4.17	3.91	Turkey	3.30	3.63	3.14
Israel	3.60	4.89	4.13	United Kingdom	3.90	4.35	3.60
Italy	3.50	3.82	2.66	USA	3.80	4.27	4.47

Source: own study.

Factor Analysis

In order to better understand, what background factors drive the value of the different F-, O- and I-indices, a factor analysis was conducted with SPSS 19. Almost 150 variables were tested during the analysis. In the first step, we checked how closely related those variables are to the three index values in the OECD countries, and what the direction of the relationship is. As a second step, all variables were only considered in the factor analysis of the index they had the highest correlational relationship with.

We were able to establish three main groups of indicators that showed a significant correlation with the index of the future potential of the OECD countries. They were labelled Human capital, Accountable corporations and Quality of the education system. The Human capital factor is a combination of indicators measuring the education and health sectors, and the productivity. The Accountable corporations factor combines such factors as the ethical and social responsibility of organisations and the credibility of managers, and so it represents the social, ethical and environmental considerations of businesses. The third factor, Quality of education system, shows the returns on efforts made in the education system.

Two factors were found with the factor analysis of the O-index, namely National goodwill and Investment conditions. The main distinction between the two factors is the time frame within which their indicators may be influenced by the

decision maker. The Investment conditions factor includes variables that can be influenced relatively easily, even over the short term; the National goodwill on the other hand may only be changed over the very long term.

Table 7.4. The factors of the F-, O- and I-index

F-index	O-index	I-index
F1 Human capital	O1 National goodwill	I1 Business competitiveness
Labour productivity (PPP) Overall productivity (PPP) Total health expenditure per capita Total public expenditure on education per capita Healthy life expectancy Total expenditure on R&D per capita	Parallel economy Investment risk Image abroad Country credit rating Brain drain Risk of political instability	Innovative capacity Productivity of companies Small and medium-size enterprises Information technology Large corporations
F2 Accountable corporations	O2 Investment conditions	I2 Government intervention
Ethical practices Social responsibility Credibility of managers	Foreign investors Exchange rate stability Capital markets Investment incentives State ownership of enterprises	Subsidies Finance and banking regulation Protectionism Legal and regulatory framework Ease of doing business Bureaucracy
F3 Quality of the education system		I3 Availability of resources
Educational assessment / Mathematics Educational assessment / Sciences Science in schools Educational system		Labour force Total primary energy supply per capita Burden of government regulation Employment rate Gross domestic savings

F-index: KMO=0.823, explained proportion 76.4%; O-index: KMO=0.803, explained proportion 73.7%; I-index: KMO=0.791, explained proportion 73.408% [1]
Source: own study.

[1] The Kaiser-Meyer-Olkin (KMO) value helps in determining how suited our variables are to factor analysis. A KMO value above 0.8 means that the variables are highly suitable. Principal component analysis and Varimax rotation were used during the analysis.

Variables having a significant correlation with the I-index can be separated into three factors. These factors were labelled Business competitiveness, Government intervention and Availability of resources. The Business competitiveness factor measures the microeconomic position of all businesses (small and medium-sized enterprises and large corporations) along such dimensions as productivity, efficiency and R&D&I. The other two factors describe the macroeconomic environment of the businesses, where the Government interventions consists of the regulation part and the Availability of resources the allocation part.

The FOI-based Strengths and Weaknesses of the Visegrad Countries

The Visegrad countries generally have a rather high outside potential, while their inside and future potentials are either mediocre or very weak. The index values measuring the potentials (Table 3) indicate that the main source of competitiveness in the Visegrad countries is the ability to attract outside resources (capital, knowledge and technology), and to create goods and services with them that are highly demanded on the world market. The best goods and services are thus produced by multinational companies, the presence of which is crucial for the competitiveness of the region.

The low values of the I-index on the other hand suggest that these countries have been rather weak compared to other OECD members in their ability of sustaining a high level of economic growth and achieving high income per capita levels. As economic growth and income per capita are the two most commonly used macro-level competitiveness indicators, the Visegrad group usually is ranked rather low in competitiveness rankings. The main problem however is not the low ranking itself, but the fact that low levels of national income automatically mean that the income spent on education and health is lagging behind other OECD members as well. These are the areas that influence the future potential a great deal, it is not surprising that the F-index of Visegrad countries is also weak.

The FOI-indices only confirm what already can be regarded as common knowledge. With the help of the factor analysis we conducted on the OECD database however, we are able to look beyond the index values, and so we can uncover connections lying behind them. Table 4 shows the factor scores of the four countries for all 8 FOI factors. Generally the factor scores are negative, indicating a below the average performance compared to the OECD average (the sum of all 34 OECD members' scores is 0). The Visegrad group performs especially poorly in factors F1 (Human capital), O1 (National goodwill) and I1 (Business competitiveness).

Counterbalancing the weak performance in many competitiveness categories, is the high score in O2 factor (Investment conditions) which is well above OECD

average in all four countries. Investment condition without a doubt can be named as the number one competitiveness edge of the region. We can also find positive factor scores for some countries in other categories, but those are not unanimous for all four of them. Poland and the Czech Republic perform well in F2 (Accountable corporations), for example, but Hungary and Slovakia are quite weak in this category. The only other factor where the Visegrad group is not well below average is I2 (Government intervention), where the Czech Republic, Hungary, Poland and Slovakia are all very close to the mean score of the OECD. The government intervention will also be discussed as a strong point of the region therefore.

Table 7.5. The performance of the Visegrad Countries in the FOI factors

Factor	Czech Republic	Hungary	Poland	Slovakia
F1	-0.85272	-1.20932	-1.44529	-1.21368
F2	0.30298	-0.2165	0.44567	-0.56779
F3	-0.90912	-0.7478	-0.58627	-0.6106
O1	-0.71219	-1.8377	-0.79603	-1.17267
O2	0.73518	0.54428	0.27644	0.77455
I1	-0.49854	-0.77119	-1.13911	-0.72947
I2	0.02599	-0.00595	0.12561	-0.25579
I3	0.15515	-1.35754	-0.69183	-0.33357

Source: own study.

Competitiveness Edges of the Visegrad Group

The FOI factors showed that the Investment conditions (O2) and the Government intervention (I2) are the two areas where the Visegrad four can gain a competitiveness edge over the rest of the world. This final section of Chapter 4 takes a closer look at the policies of the Czech Republic, Hungary, Poland and Slovakia to identify the best practices of the region.

Investment Conditions

The Visegrad countries have been a target of foreign investors since their transition to the market economy in 1989-90. Although – due to its size – the region has never been an FDI hotspot (in 2012 around USD 30 billion flew into the V4 economies, while China received USD 120 billion, the USA 167 billion according to UNCTAD statistics), the steady inflow of investments over the last two decades has led to an impressive FDI stock (compared to the size of the economy, see Figure 3).

The dynamic build up in FDI stocks may be partially explained by the transition process: mass privatisation and the opportunity for Western companies to get access to local markets. Privatisation revenues in the V4 countries has reached up to 5-6% of the GDP on a yearly basis, but they were highly volatile as well. In

Hungary there were two major waves during the periods of 1990-1997 and 2003-2007; in Slovakia a very intensive one during 2000-2004; it was a bit more balanced in the Czech Republic with peaks in 1995, 2002 and 2005. But by the end of the 2010s the privatisation process halted or slowed down significantly in all three countries. Poland was the only exception where after the initial peaks of 1998-2000 and 2004, there was another big wave of privatisation in 2010-11 (the data are available at privatizationbarometer.net).

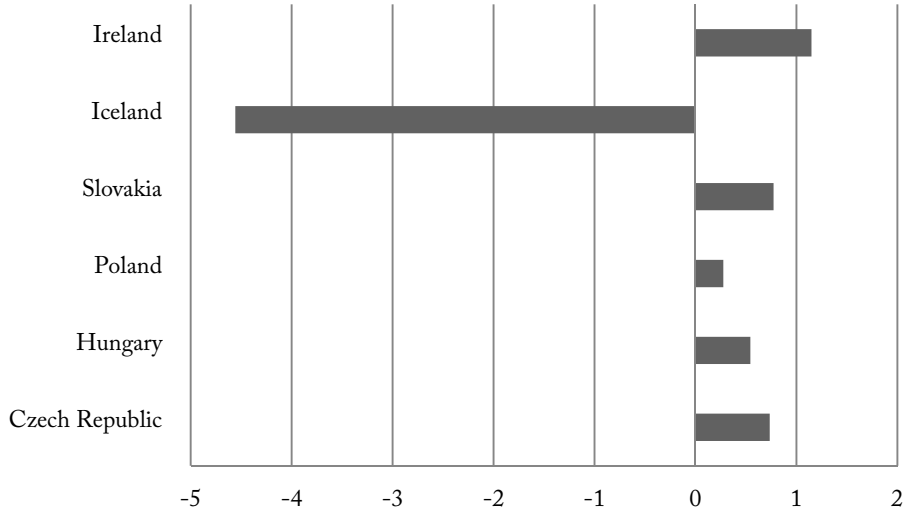


Figure 7.2. The position of the Visegrad countries in Investment conditions O2 compared to the best and the worst OECD member
Source: own study.

The slowdown or complete halt of privatisation can only be partially explained by the depletion of the state-owned enterprises pool. The V4 countries still have the most state-owned enterprises within the OECD (Poland had 586, Hungary 358 and the Czech Republic 124 in 2008 – Christiansen 2011), and are in the top 10 in terms of the ratio of employees working for state-owned enterprises (other countries in the top 10 include Norway, Finland, France and Sweden – Christiansen 2011). Hence there is a considerable privatisation reserve in the region which could intensify the inflow of FDI in the future.

It worth noting though, that this privatisation reserve may not be on the market in the near future. There are signs that prompt to an anti-privatisation shift in the attitudes of the policymakers, and even a turn towards nationalisation: there was a plan to nationalise private health insurances in Slovakia; a good part of the Polish and Hungarian private pension funds had already been merged with the public fund;

and the Hungarian government has made a habit of shopping for energy and utilities firms in recent years.

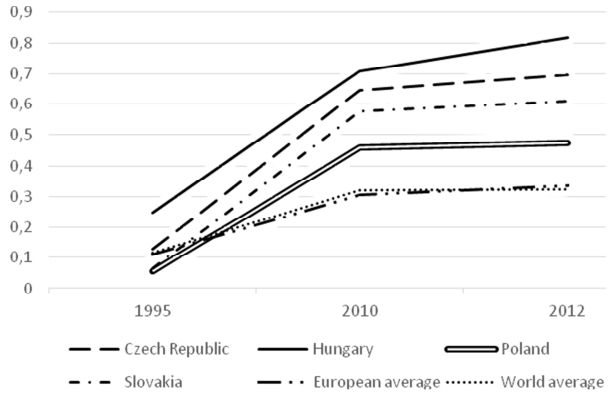


Figure 7.3. Inward FDI stock in V4 countries as percentage of GDP
Source: own study based on UNCTAD – World Investment Report.

Instead of drawing more foreign investors by selling already established companies, the Visegrad countries focus on creating a favourable investment climate for greenfield investments. All four countries offer very generous support for companies that create extra jobs and invest in certain focus industries. The government incentives usually include corporate tax relieves (up to 10 years), government grants and subsidies paid after the number of jobs created and/or the amount of capital invested, and transfer of state property at discounted price. The aid intensity is based on regional multipliers, so the same amount of investment can trigger a lot more government aid if invested in regions with high unemployment and low level of development.

The investment incentives are focused on some key industries, although the level of focus is different from country to country, and generally investments in non-key industries are eligible to some government grants too (with higher minimum requirements). The focus areas are:

– Czech Republic: manufacturing in general; technology centres; and business support services centres (shared services, software-development and high-tech repair services).
– Hungary: manufacturing in general; research and development; and shared service centres.
– Poland: automotive sector; electronic sector; aviation sector; biotechnology sector; modern services sector; and research and development.

– Slovakia: manufacturing in general; technology centres; shared services centres; tourism.

Table 7.6. Minimum requirements for government incentives in the V4 countries

Government incentives	CZ	HU	PL	SK
Minimum number of jobs created (focus industry)	40	25	250	40
Minimum amount of investment (million EUR, focus industry)	5	1	10-40	3-10 1.5-5 (SME)

Source: http://www.czechinvest.org; http://www.hita.hu; http://www.paiz.gov.pl; http://www.sario.sk).

Table 7.5 shows the minimum requirements for an investment to be eligible to government subsidies. In some cases these requirements are not completely comparable, because they vary according to the type of the incentive (subsidy for job creation, government grant or tax relief), to the multiplier of the region (developed or underdeveloped compared to the country average), and to the size of the investor (large company or SME). Hungary has typically the lowest requirements, and Poland the highest ones, although Poland has set up the system of Special Investment Zones (SEZs), and the SEZs create much lower minimum requirements thanks to their multipliers.

Table 7.7. Typical forms and values of investment incentives in V4 countries

Government incentives	CZ	HU	PL	SK
Amount of subsidy per job created (EUR, focus industry)	-9.000	4.000- 8.000	800- 4.000	4.000- 10.000
Duration of corporate tax relief (years)	10	10	NA	10
Maximum corporate tax relief (%)	100	80	NA	10-35

Source: http://www.czechinvest.org; http://www.hita.hu; http://www.paiz.gov.pl; http://www.sario.sk).

There is no great variation in the value of government subsidies either (see Table 6). Poland, again, seems to be somewhat stricter in this regard, but the other three Visegrad countries have quite similar incentives schemes. Typically companies have to agree to sustain their level of activity for 3-5 years to become eligible to government aid. In case of the Czech Republic and Hungary, training and retraining costs can also be partly funded by the government, which further increase the value of the subsidy on a new job created. Companies investing in Polish SEZs are also eligible to some corporate tax exemptions, and they can also get a real estate tax exemption. The real estate tax is considered a local tax, and so local municipalities

have an influence over it. The same applies to Hungary as well, where the local governments may grant local business tax relieves for investors.

The Hungarian government has also introduced the institution of strategic alliances. A company can become the strategic ally of Hungary if it has invested a considerable amount (worth several hundred millions of Euro) in the country, employs a lot of people (several hundred), and signs a contract with the government about the alliance. As of early 2014, there were 41 strategic alliances signed in Hungary. Although the contract is not very factual in nature, the companies usually agree to further increase employment, increase their R&D activity in the country, involve more local suppliers in the value chain and stay active supporters of the local societies, while the Hungarian government offers tax incentives, eligibility to government grants, and public procurement privileges in exchange.

The exchange rate regimes also influence the investment conditions in the V4 countries. Interestingly enough the four countries have taken two completely opposing routes in this respect. Hungary and Poland allowed their currencies to considerably depreciate against the Euro: the Hungarian forint was around 30%, the Polish zloty around 25% weaker against the euro in 2014, than they were in the middle of 2008. Slovakia on the other hand joined the Eurozone in 2009, eliminating all exchange rate volatility compared to the euro. The Czech Republic still has its own currency, but the koruna traded close to the 25 CZK/EUR exchange rate for most of the post 2008 period, and it is currently around 10% weaker against the euro than it was in mid-2008.

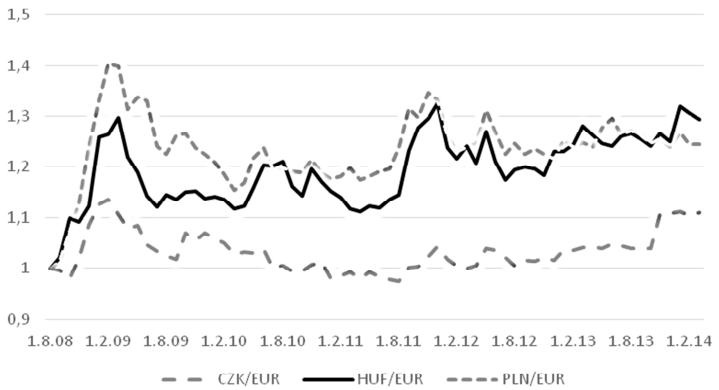


Figure 7.4. Changes in the forint, koruna and zloty per euro exchange rates (2008 August=100%)
Source: own study based on ECB data: http://sdw.ecb.europa.eu/browse.do?node=2018794.

The Czech-Slovakian route is generally regarded as the better one as far as the investment conditions go. A stable exchange rate makes it easier to calculate foreign

prices, and guarantees the euro value of investments and the profits on those investments. Exchange rate stability is considered by some as one of the most important indicators of an economic policy committed to the attraction of foreign direct investors.

The depreciation of the local currency on the other hand can also give some advantages to investors, although these advantages usually are only temporary. The depreciation of the forint and the zloty has made the labour costs of local producers a lot lower in euro terms, which is a major competitiveness boost. As Figure 5 shows, hourly labour costs (more precisely: hourly labour costs in industry, construction and services – except public administration, defense and compulsory social security) were almost identical in Hungary, Poland and Slovakia in 2008 (7.8 euros in Hungary, 7.6 in Poland, and 7.3 in Slovakia). By 2013 however the picture changed: Hungarian labour costs slightly decreased over the 5 years, the Polish stayed the same, while there was a steady rise in the Slovakian ones. Czech labour costs, just as the Slovakian ones, increased over the period.

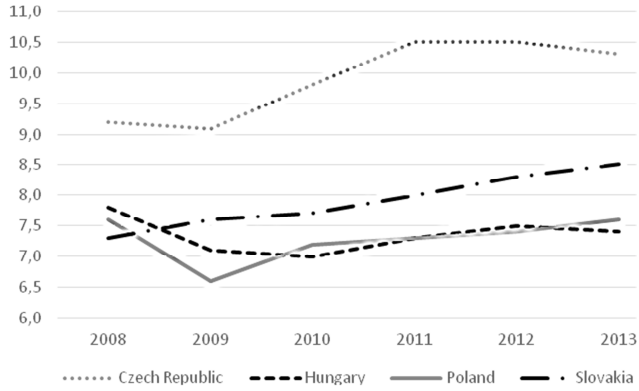


Figure 7.5. Hourly labour cost in the V4 countries (annual average in euros)
Source: own study based on Eurostat data:
http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/database).

Despite these differences, low labour costs are still one of the major competitiveness edges of the Visegrad countries in general. The hourly labour cost was 10.3 euros in 2013 in the Czech Republic, which was only 43% of the EU-27 average, and 36% of the Euro area average (28.4 euros).

Government Intervention

The factor of government intervention describes the macroeconomic environment of businesses. It contains regulations and economic policies, which influence this environment. The elements of this factor can be seen in Table 7.4.

The best performing country of this factor is Luxembourg, the weakest is Iceland. As far as this factor is concerned, Visegrad countries are middle-ranking, Poland is the 15th, the Czech Republic ranks 17th, Hungary is 18th, Slovakia takes the 20th place. Despite the fact that the Visegrad countries' factor scores are close to the average of the OECD countries, the countries' performance can be regarded as a competitive edge of the Visegrad group.

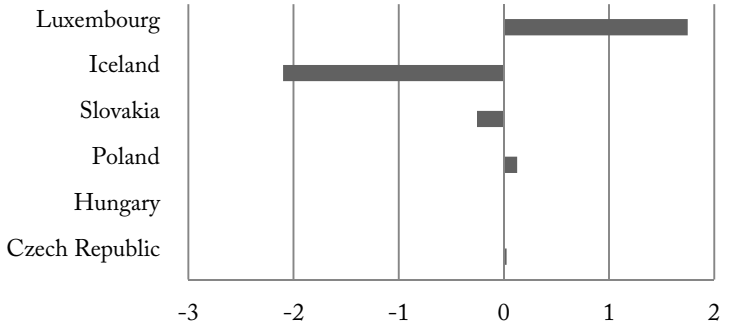


Figure 7.6. The position of the Visegrad countries in government intervention compared to the top and worst bottom-ranked OECD member
Source: own study.

The rankings of the World Competitiveness Index (WCI), published by the IMD, also show the relatively good performance of Visegrad countries in the field of government regulation. Here the Czech Republic and Poland improved their competitiveness, Hungary and Slovakia regressed in competitiveness during the 2000s. According to the Government Efficiency Factor, which is one factor out of four used to compute the IMD rankings, the Czech Republic ranked 28th, Poland was the 35th, Slovakia took the 42nd position and Hungary ranked 52nd in the international rankings in 2011. This factor measures the extent to which government policies are conducive to competitiveness. Except for Hungary, Visegrad countries have improved their position in the last decade. Poland and the Czech Republic improved their performance even during the economic crisis.

The historical heritage of the Visegrad countries plays a significant role in the extent and the way of government intervention. Some of the old socialist values and institutions are still preserved even today and influence various fields of a county's

everyday life. The majority of people still have a strong demand for active government contribution (Ferge *et al.*, 1997) especially in the field of health, education and pension scheme.

This fact t is reflected in a relatively high level of government revenues. It is only Hungary that has above the OECD average figures since its gained revenue has increased in the last decade. As Figure 7 shows, in 2011, the central government revenues represented 41.9% of GDP on average across OECD countries, in Hungary the revenue amounted to 53.8%, in the Czech Republic it was 40.0%, in Poland it accounted for 38.4% and in Slovakia it was 33.3%.

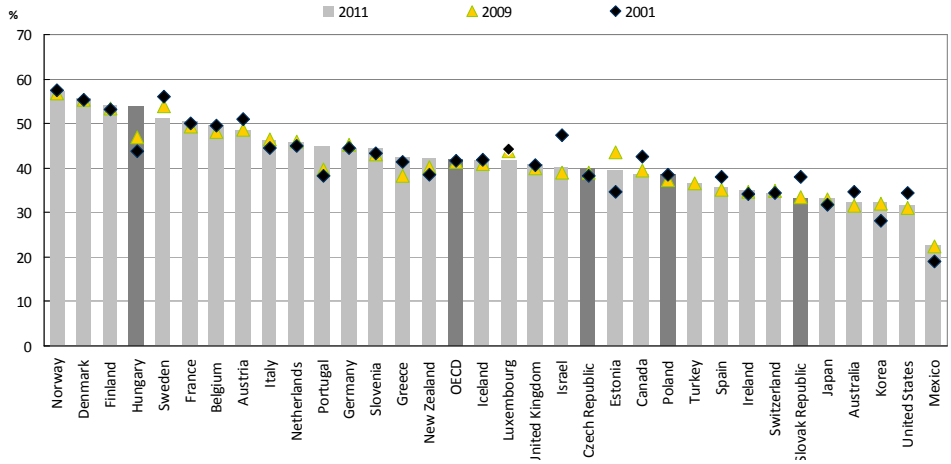


Figure 7.7. General government revenues as a percentage of GDP in 2001, 2009 and 2011
Source: (OECD 2013a, p. 69).

Central government revenues came primarily from taxes. However, the share of this type of revenue within the total revenue was not as high as the OECD average. The OECD average is 61.2%, while in Poland it is 54.1%, in Slovakia it amounts to 48.0%, in the Czech Republic it accounts for 47.1% and in Hungary it is only 43.9%. Here the structure of government revenues changed significantly, grants and other contributions increased by 16.7 percentage points, at the expense of taxes from 2009 to 2011 (OECD 2013a).

Only in Hungary and in the Czech Republic tax revenues as a percentage of GDP are higher than the OECD average. Figure 8 illustrates that revenues show a gradual decrease in Slovakia.

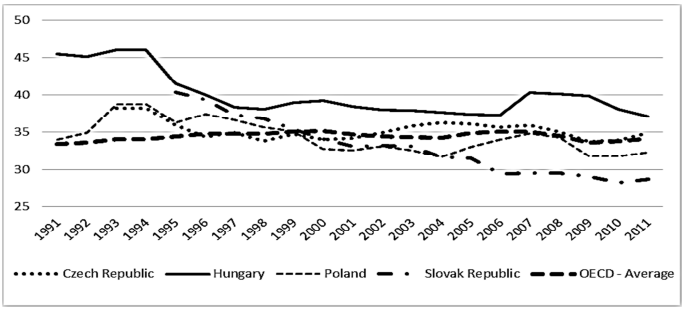


Figure 7.8. Tax revenue as percentage of GDP
Source: own study based on OECD.Stat.

In 2011, central government expenditures accounted for 45.4% of GDP on average across OECD countries. Here again, Hungary had a higher value (49.6 %), the other Visegrad countries spent less than the OECD average.

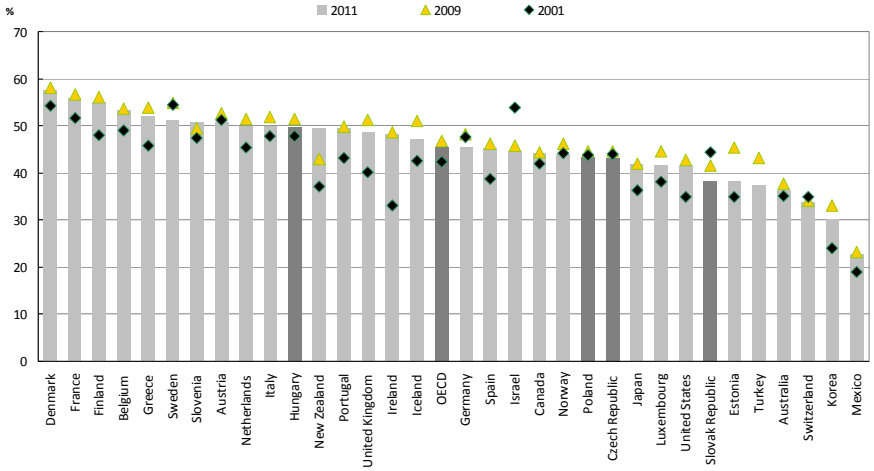


Figure 7.9. General government expenditures as a percentage of GDP in 2001, 2009 and 2011
Source: (OECD 2013a, p. 75).

Social protection was the largest component of government spending in every country under survey. It was followed by health, which had the highest ratio in the Czech Republic (in the Czech Republic it was 18.1%, whereas the OECD average was 14.5%). Except for Slovakia, the Visegrad countries spend more on economic affairs, than the OECD average. Hungary and Poland increased this type of their spending between 2001 and 2011, whereas the Czech Republic decreased it significantly by 6.4% during the analysed period. The costs of social protection increased in almost every country as a result of the financial and economic crisis, but

in the analysed period Poland decreased it by 4.9%. On the one hand because Poland performed relatively well during the crises (it maintained continuous growth) on the other hand because of the introduced reforms as a response of the crisis (for example pension reform, public employment reform) (Novotný, 2013).

Table 7 shows the structure of general government expenditures by function in 2011 and the change in the structure of expenditures from 2001 to 2011.

On average, general government debt across OECD members amounted to 78.8% of GDP in 2011 (OECD 2013a). Only Hungary had above-the-average data (85.6%), in Poland it was as high as 63.4%, in Slovakia it accounted to 48.1 and in the Czech Republic it was only 47.8%.

Although the redistribution in the Visegrad countries was high, the trust in governments remained at a low level, which seems to be due to their common heritage from the socialist era. In 2012 only 21 % of respondents in Hungary had confidence in their national government. In the Czech Republic the results were even worse with 17%. Both in Poland and Slovakia this ratio was also below the OECD average (Gallup 2012).

Table 7.8. Structure of general government expenditures by function (share of total expenditure, 2011)

Functions	Czech Republic	Hungary	Poland	Slovakia	OECD
General public services	10.7	17.5	13.4	15.4	13.6
Defence	2.1	2.3	2.7	2.7	3.6
Public order and safety	4.3	3.9	4.2	6.4	3.9
Economic affairs	13.9	14.4	13.0	9.8	10.5
Environmental protection	3.1	1.5	1.6	2.7	1.6
Housing and community amenities	1.9	1.6	2.0	2.6	1.6
Health	18.1	10.4	10.9	15.5	14.5
Recreation, culture and religion	2.9	3.5	3.0	3.0	2.7
Education	11.4	10.5	12.8	10.6	12.5
Social protection	31.7	34.5	36.6	31.3	35.6

Source: (OECD 2013a, p. 76).

There is a strong correlation between perception of corruption and trust in governments. According to the Corruption Perceptions Index, Poland had the highest score, it ranked 38th on the international scale. Other Visegrad countries received worse scores, Hungary was the 47th, the Czech Republic ranked 57th, Slovakia took 61st place on the Index ranking[2].

[2] Corruption Perceptions Index 2013 http://www.transparency.org/cpi2013/results

The low trust level is considered a huge problem in the business sector as well. The Visegrad countries attempt to find ways to combat corruption. For example they take measures to improve contract enforcement or apply legislative measures to increase the investor confidence.

The Visegrad countries introduced open-door policies for foreign investors after the political transition. It was critical to create and maintain a favourable, stable and reliable business environment.

After the opening the market to multinationals, the legislation aimed to improve the business environment and maintain competitiveness. However, at the same time the sector of small and medium-sized companies came into the focus of this legislation. Every country under survey paid great importance to promoting small and medium-sized companies and enhancing their competitiveness.

Table 7.9 The year of passing economic laws which were important from investment perspectives

Law	Czech Republic	Hungary	Poland	Slovakia
The first regulation on foreign investments	1985	1972	1986	1985
Permission of 100% foreign ownership	1989	1988	1988	1989
Opening the Stock Exchange	1993	1990	1991	1993
Company Act	1992	1988	1991	1992
Competition Act	1992	1990	1990	1992
Bankruptcy laws	1993	1991	1990	1993
Two-tier banking systems	1990	1987	1989	1990

Source: WIIW: Transition Report. Forschungsberichte No. 215.

The Visegrad countries decreased administrative and legal burdens of enterprises. For example, the time required to start up a business was reduced and the number of documentation to be submitted decreased. To this end, the performance of Hungary was considered to be outstanding, and the time necessary to start up a business was shortened to 5 days. The countries also improved electronic services and procedures (for example making it possible to submit tax returns electronically)[3].

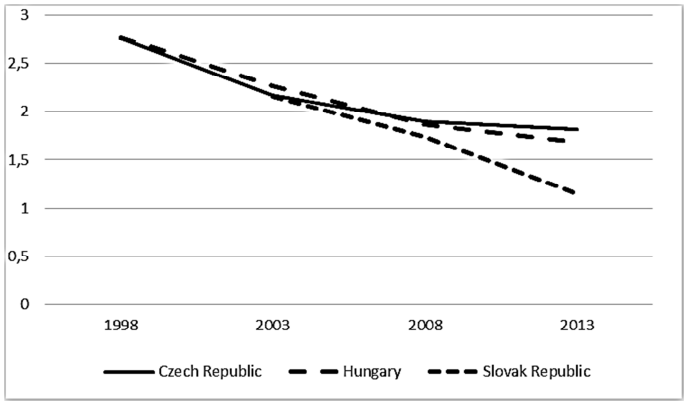
The barriers to entrepreneurship index of the OECD shows that there has been a gradual decrease in administrative and legal burdens of entrepreneurship in the Czech Republic, Hungary and Slovakia (data of Poland were not available) in the past few years.

Finally, apart from the business environment and government efficiency, there is another possible factor which measures the relative competitiveness of different

[3] Doing Business, Business Reform Summaries: http://www.doingbusiness.org/reforms

countries. This factor is the tax-competitiveness. It depends not only on the favourable tax levels but on the computability of the tax system as well. Some taxes, for example, a corporate tax are relatively low in the Visegrad countries in international comparison. However, the tendency of decreasing corporate tax rates is a common practise in almost all OECD countries. Between 2010 and 2012 the corporate tax rate was below 19 % in every Visegrad countries, but in 2013 the Slovak Republic increased it to 23 %.

All Visegrad countries apply a flat personal income tax rate. Hungary was the last among Visegrad countries that introduced this type of tax only in 2011 (16 % flat rate). The tax and social security wedges on labour influenced the competitiveness of Hungary in the most negative way compared to the four analysed countries. While in other Visegrad countries the average personal income tax ranged between 5.5-24.7%, in Hungary it ranged between 26.3-35.4%. This meant that the tax wedge was outstandingly high.



Note: Index scale of 0-6 from least to most restrictive. The indicators cover formal regulations in the following areas: state control of business enterprises; legal and administrative barriers to entrepreneurship; barriers to international trade and investment. Not all data are available for all countries for all years.

Figure 7.10. Barriers to entrepreneurship
Source: OECD Product Market Regulation 2013 http://stats.oecd.org

Table 7.10. ´All-in´ average personal income tax rates at AW by family type, 2013

Country	All-in rate				All-in less cash transfers		
	single		one-earner married couple		single	one-earner married couple	
	no child	two children	no child	two children	single with two children	no child	two children
Czech Republic	22.8%	13.8%	14.5%	5.5%	3.7%	14.5%	- 6.5%
Hungary	34.5%	26.3%	34.5%	26.3%	14.1%	34.5%	15.3%
Poland	24.7%	18.0%	23.4%	18.0%	18.0%	23.4%	18.0%
Slovakia	22.8%	17.7%	15.7%	10.6%	12.1%	15.7%	5.1%

All-in: The all-in tax rate, calculated as the combined central and sub-central government income tax plus employee social security contribution, as a percentage of gross wage earnings. All-in less cash transfers: The combined central and sub-central government income tax plus employee social security contribution, less family benefits (in respect of dependent children) paid by general government as universal cash transfers, as a percentage of gross wage earnings.
Source: OECD Tax Database

Consumption taxes as a percentage of GDP had the greatest ratio in Hungary (15.5% in 2011), the second in the rank was Poland with 12.2%. The consumption taxes in the Slovak Republic and in the Czech Republic were close to the OECD countries' average (OECD 2013b). The VAT rates were higher in all the Visegrad countries than in the OECD countries. However they were more or less predictable, except for Hungary, where the tax rate had changed quite frequently.

Table 7.11. VAT rates in Visegrad countries in the years 2000-2012

Country	2000	2002	2004	2006	2008	2010	2012
Czech Republic	22	22	22	19	19	20	20
Hungary	25	25	25	20	20	25	27
Poland	22	22	22	22	22	22	23
Slovakia	23	23	19	19	19	19	20
Unweighted OECD average	18.0	17.9	17.9	17.7	17.7	18.0	18.7

Source: OECD Tax Database.

7.5. CONCLUSIONS

According to the FOI model analysis the Visegrad countries have a macroeconomic competitiveness edge over other OECD countries in investment conditions and government intervention. The group's advantage is quite obvious in some cases. They have the lowest labour costs within the European OECD members; the corporate tax rates are also among the lowest in the OECD, although corporate taxes have been dropping all over the world for the past decades; and they offer very

generous investment incentives (both tax relieves and substantial government grants and subsidies connected to the level of investment and the number of jobs created). In other cases one can only detect relative advantages, meaning that compared to other factors, where the Visegrad countries fare quite badly, in some elements of investment conditions and government intervention they are close to the OECD average, and improving. Although corruption has been traditionally an issue in the region, several steps were taken in all four countries to counter the problem. The legal and administrative burdens on enterprises have been dropping all the time, thanks to moves that made it easier to acquire licences, to handle transactions with the state electronically.

Overall the FOI model shows that the Visegrad countries try to gain a competitiveness advantage over their more developed rivals by focusing on the attraction of outside resources (capital and technology). The low tax rates and labour costs, the decreasing legal and administrative burdens all point into this direction, these are instruments however that also affect the competitiveness of local businesses as well.

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